

FIG. 1

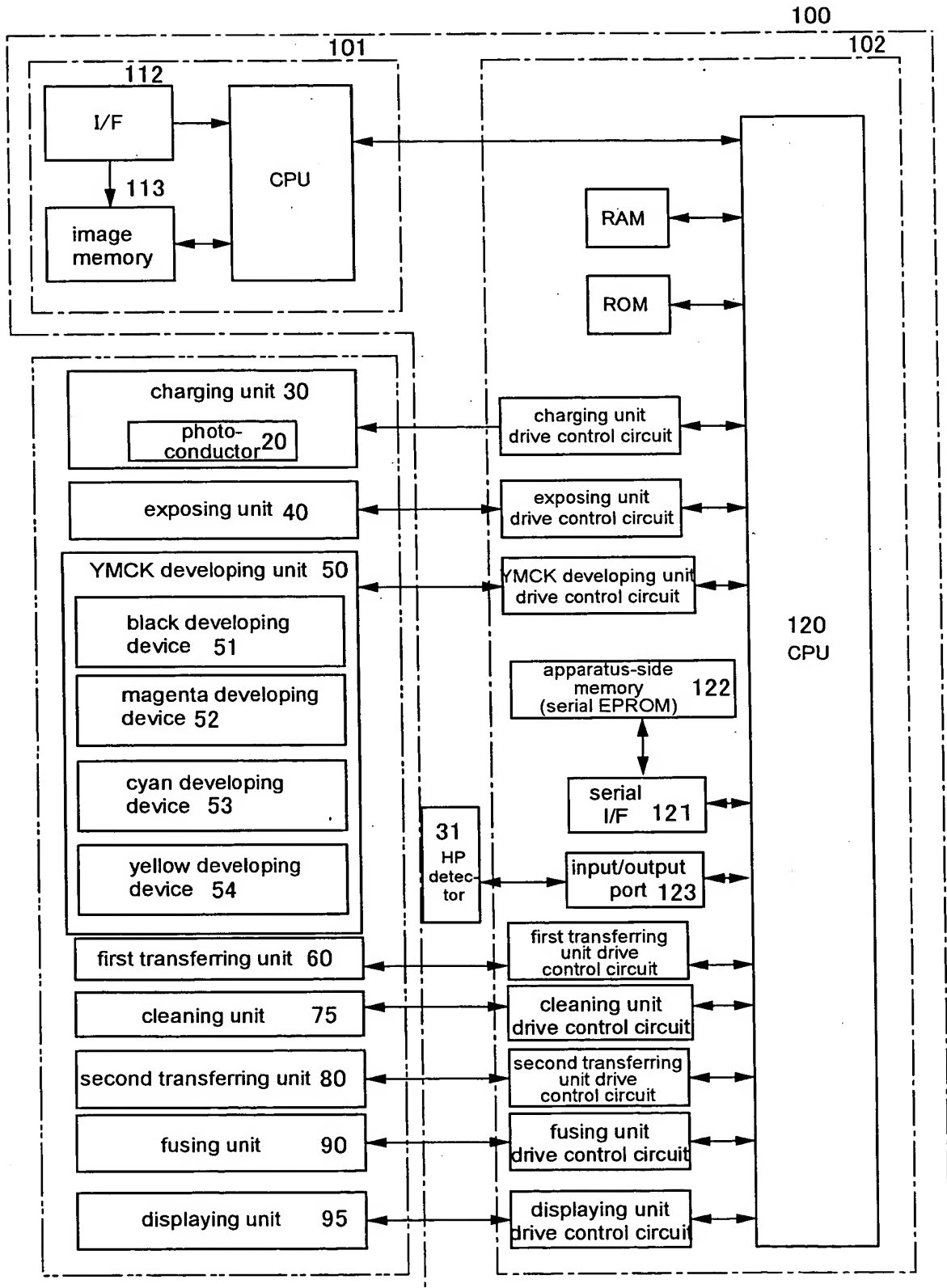


FIG. 2

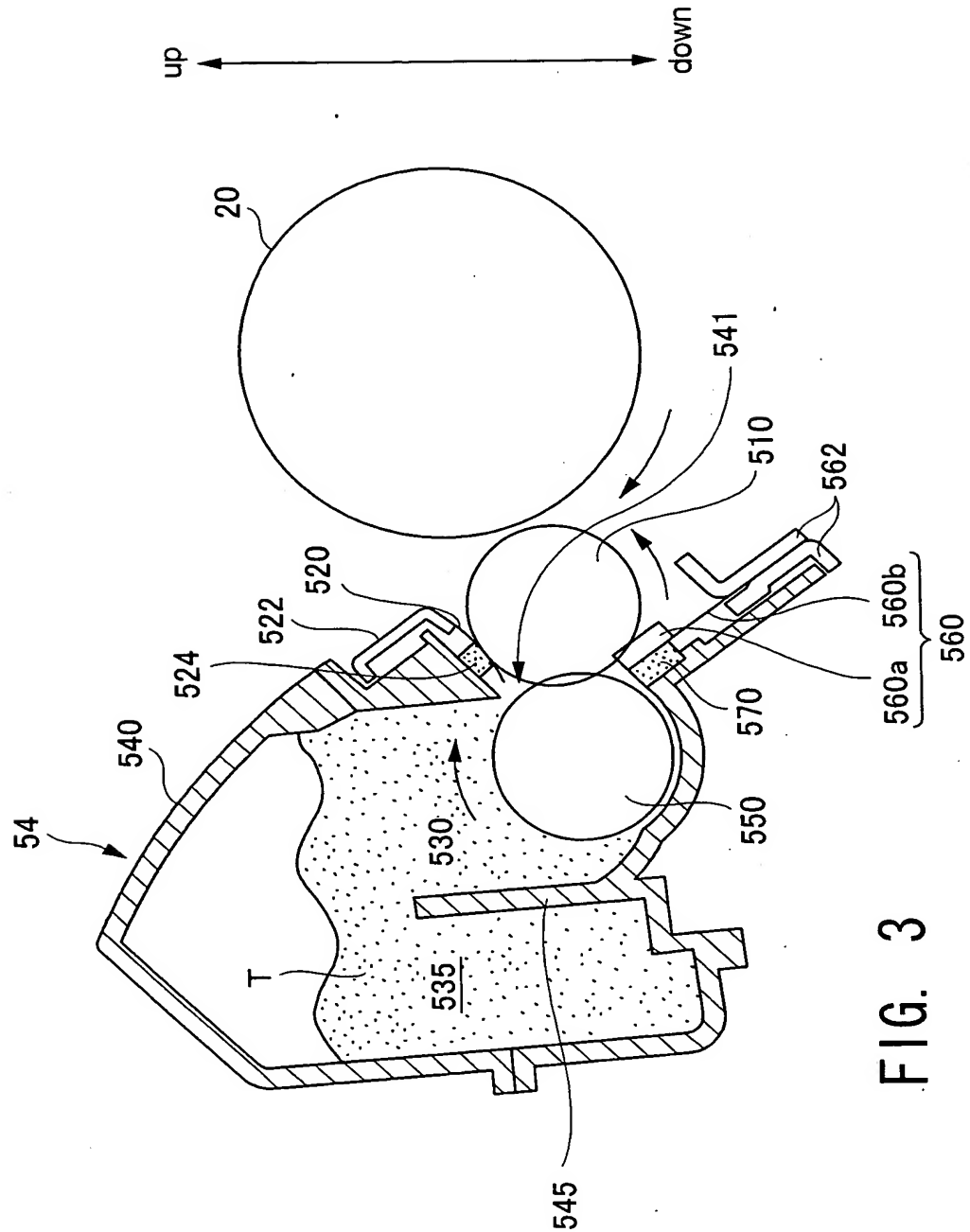


FIG. 3

FIG. 4A

HP position (standby position)

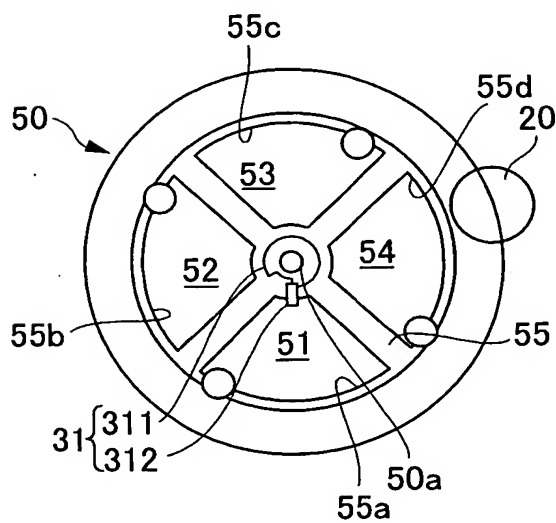
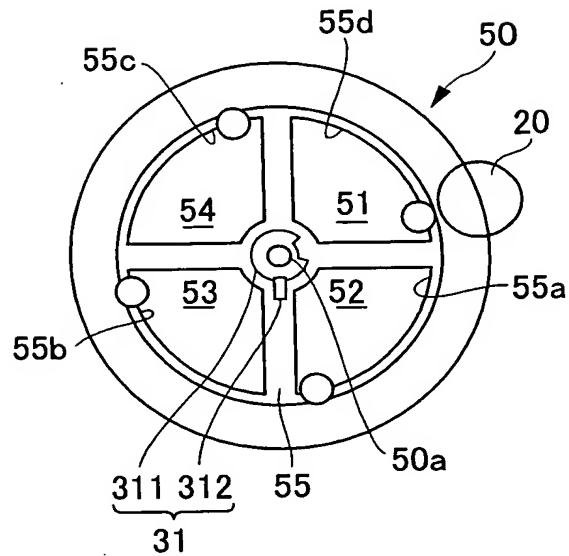


FIG. 4B

developing position



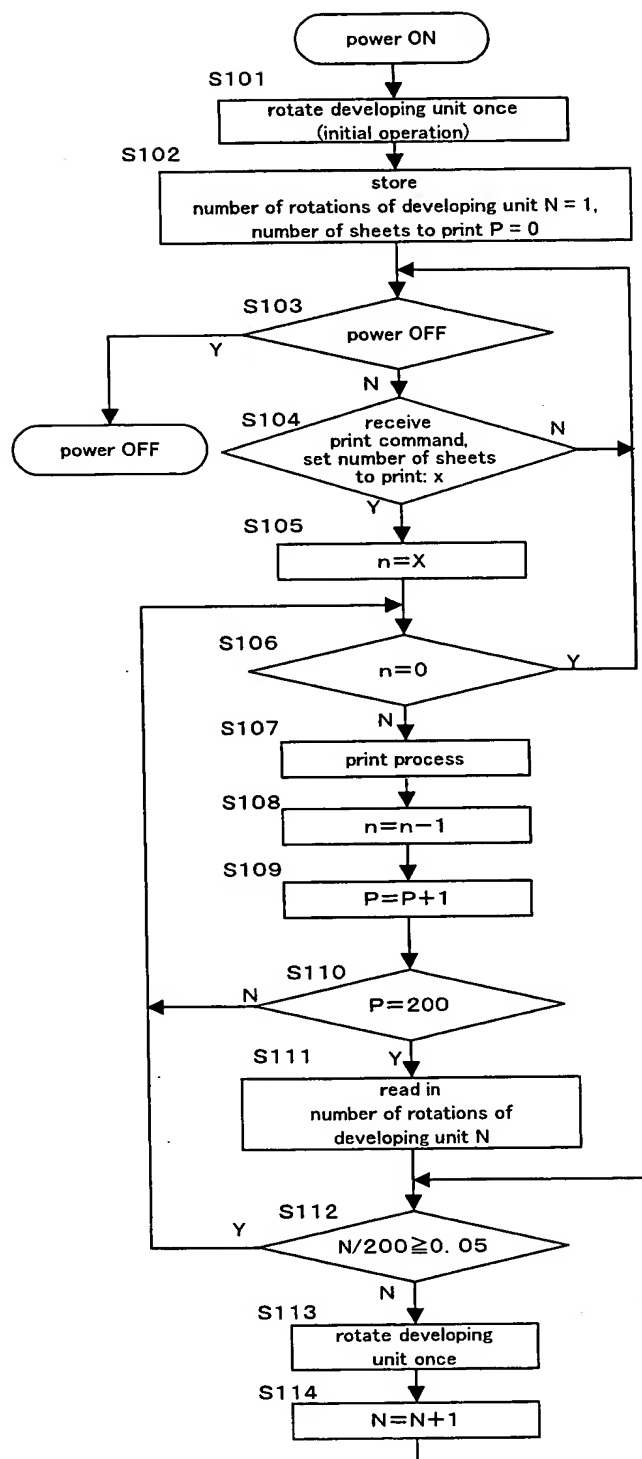


FIG. 5

TYPE1

JOB NO.	MODE	NUMBER OF OUTPUT SHEETS
JOB 1	MONO- CHROME	10
JOB 2	COLOR	5
JOB 3	MONO- CHROME	105
JOB 4	MONO- CHROME	70
JOB 5	COLOR	2
JOB 6	COLOR	2
JOB 7	COLOR	1
JOB 8	MONO- CHROME	5
TOTAL		200

TYPE2

JOB NO.	MODE	NUMBER OF OUTPUT SHEETS
JOB 1	MONO- CHROME	40
JOB 2	MONO- CHROME	160
TOTAL		200

TYPE3

JOB NO.	MODE	NUMBER OF OUTPUT SHEETS
JOB 1	MONO- CHROME	200
TOTAL		200

FIG. 6

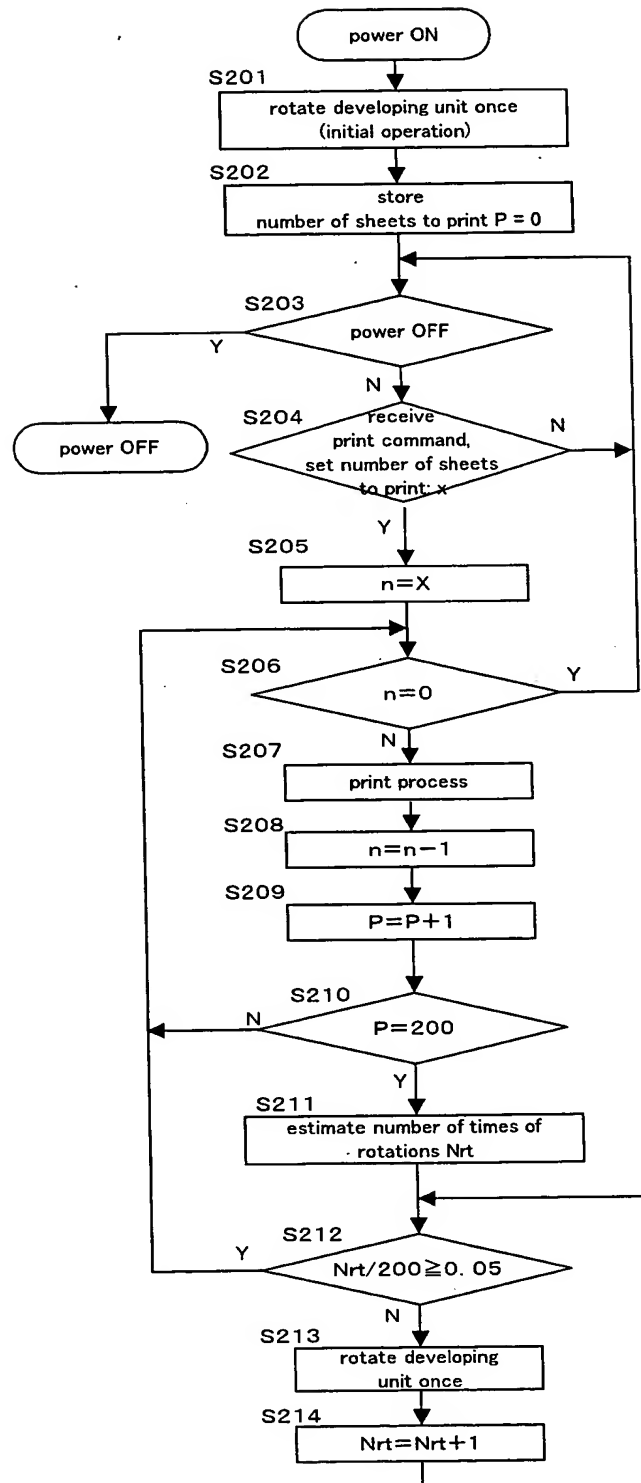


FIG. 7

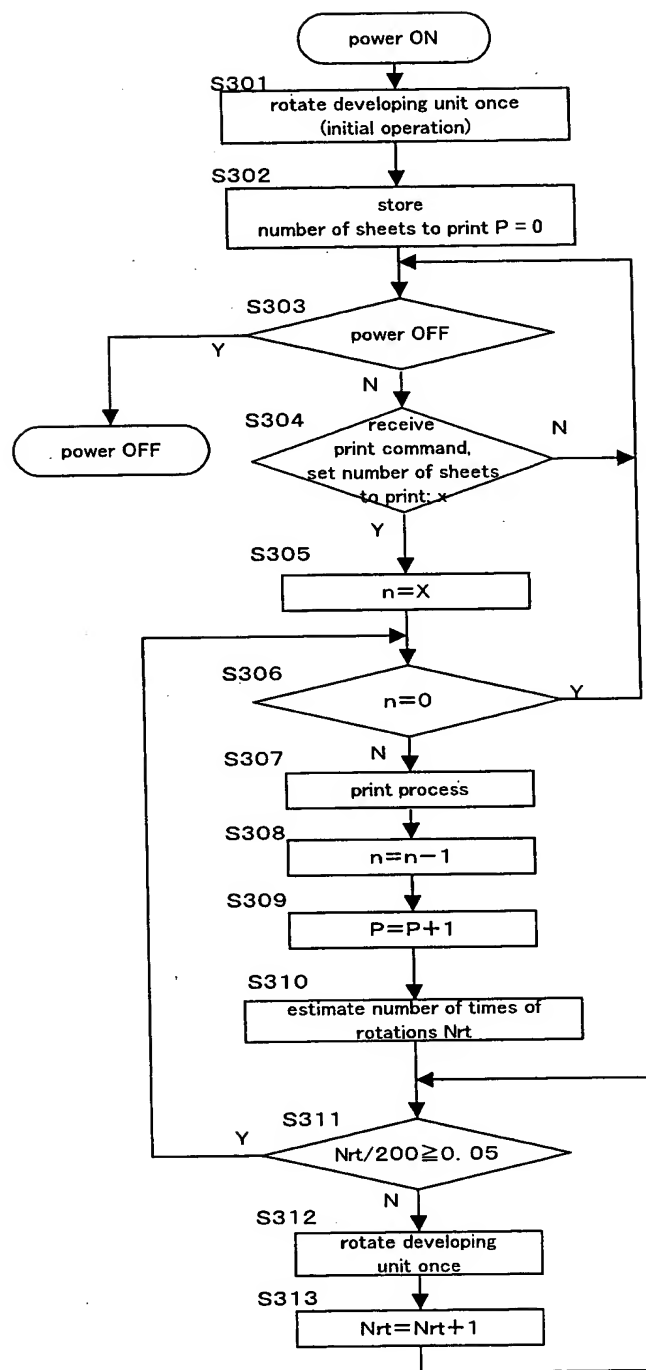


FIG. 8



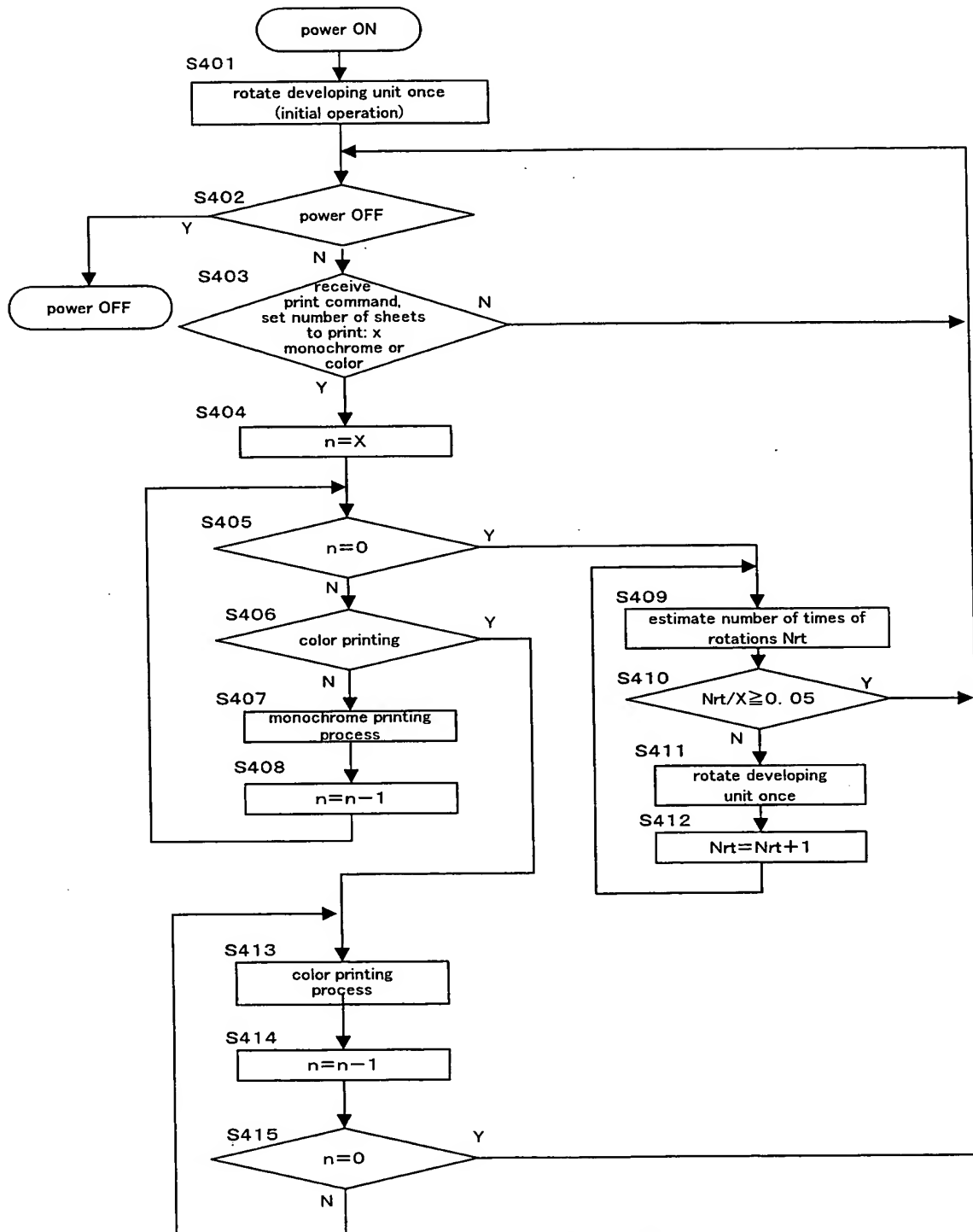


FIG. 9

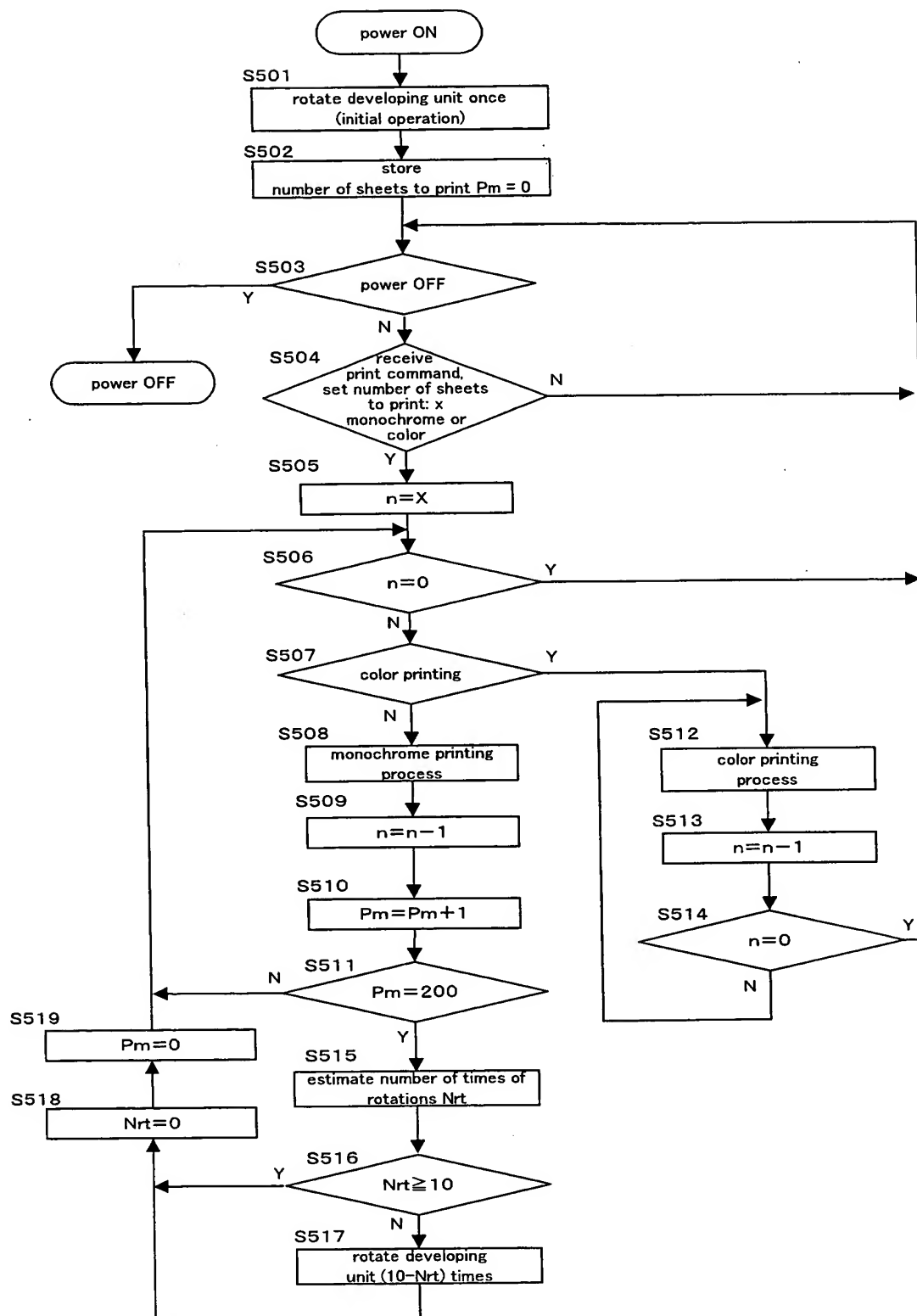


FIG. 10

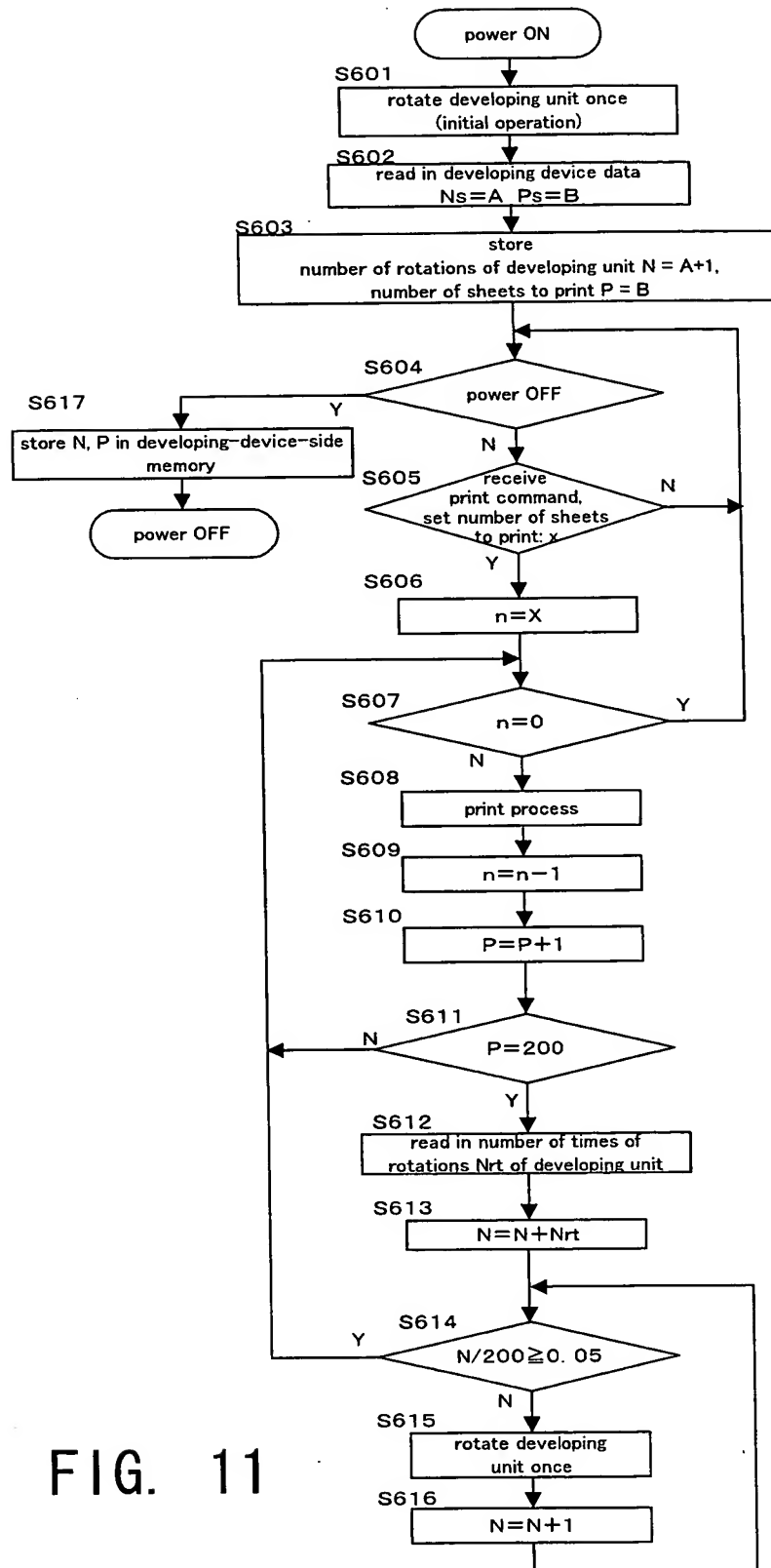


FIG. 11

EXAMPLE OF DATA TABLE OF REFERENCE VALUES  
(total number of times of rotations / total number of output sheets)

		remaining amount of toner	
		150~250g	50~150g
amount of time driven	0 - 3000 sheets	0.03	0.03
	3000 - 6000 sheets	0.05	0.04
	6000 - 9000 sheets	0.07	0.05

FIG. 12

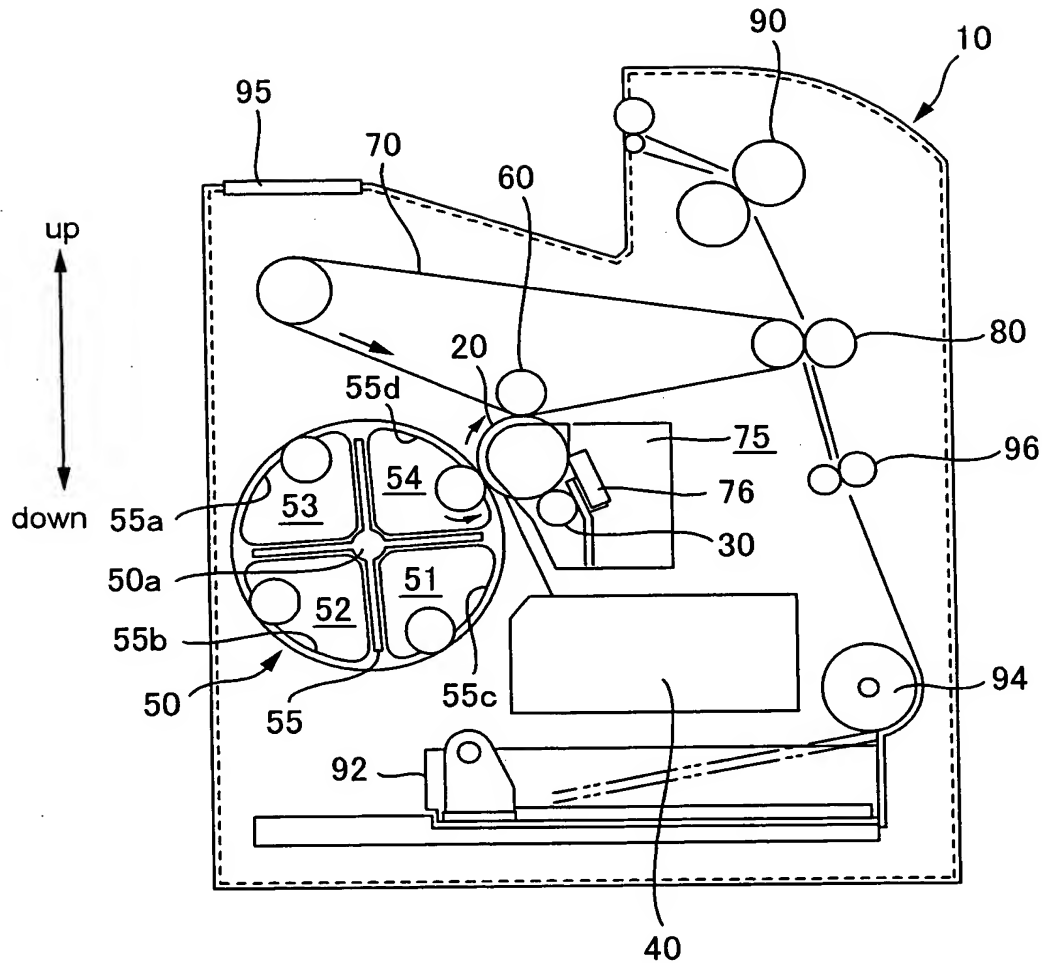


FIG. 13

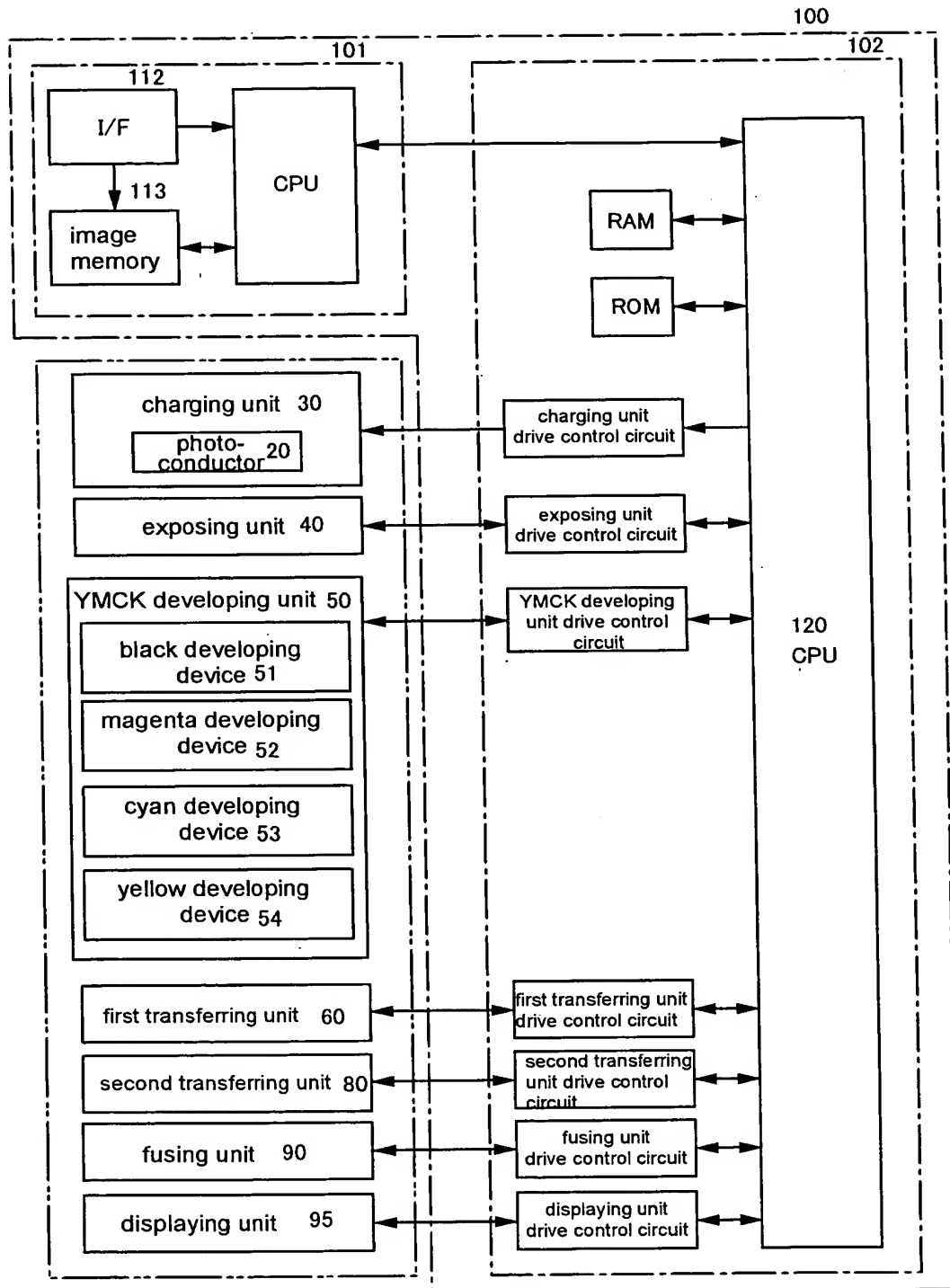


FIG. 14

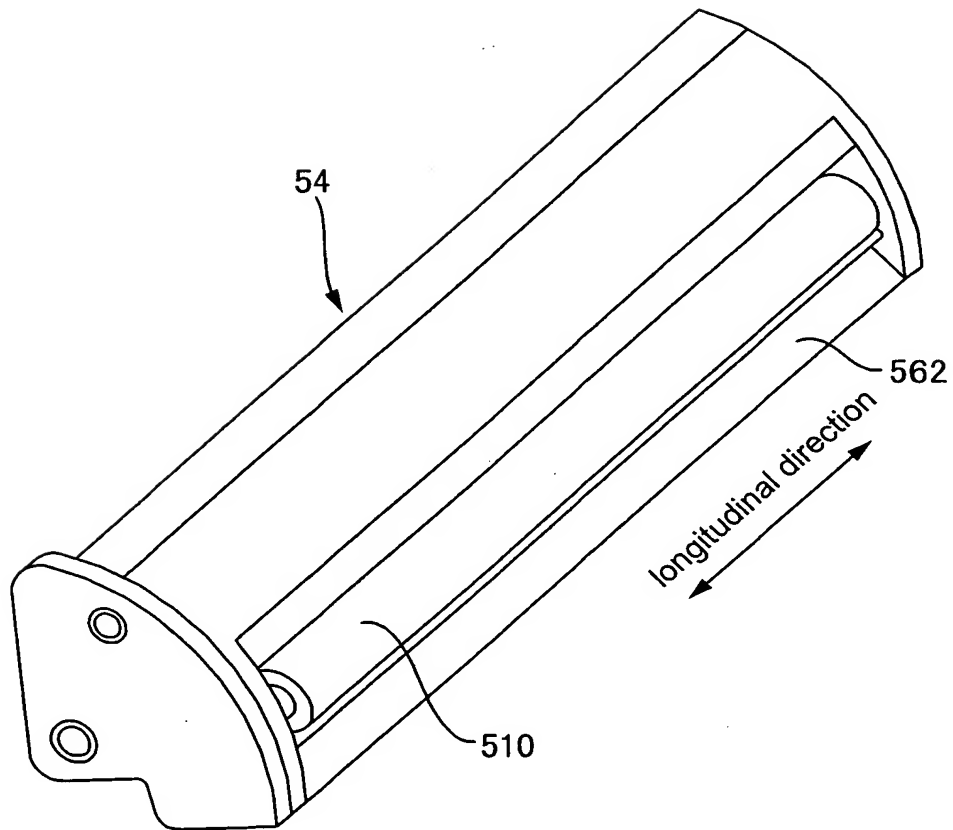


FIG. 15

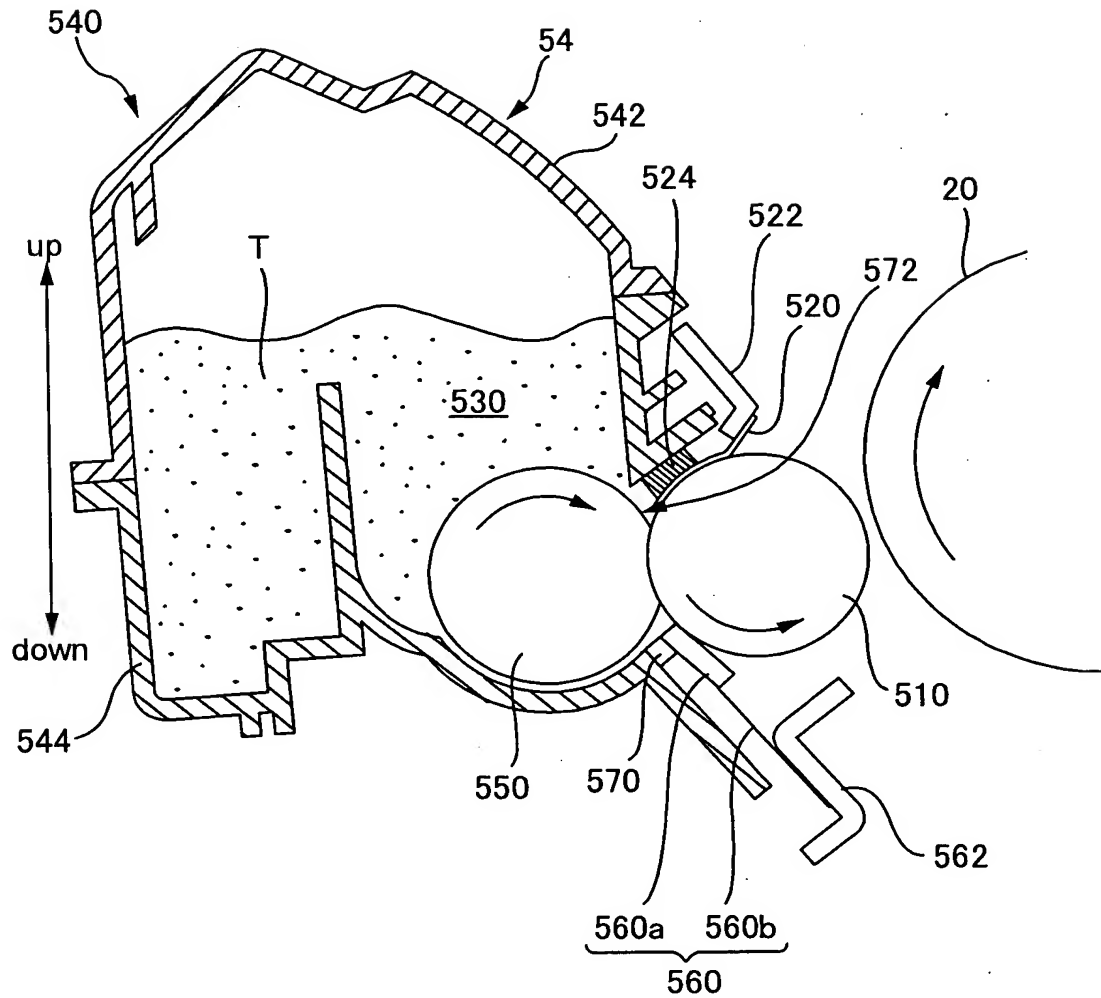


FIG. 16



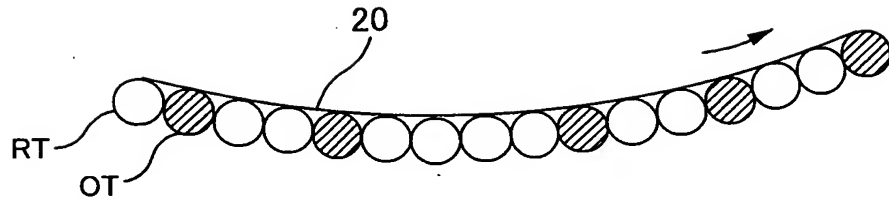


FIG. 17

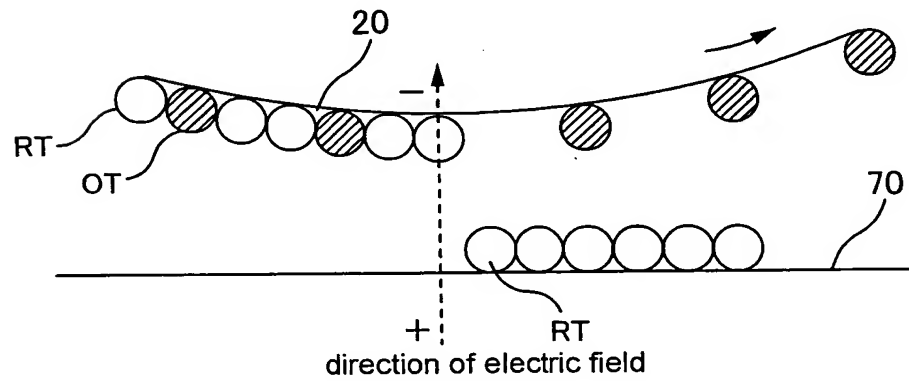


FIG. 18

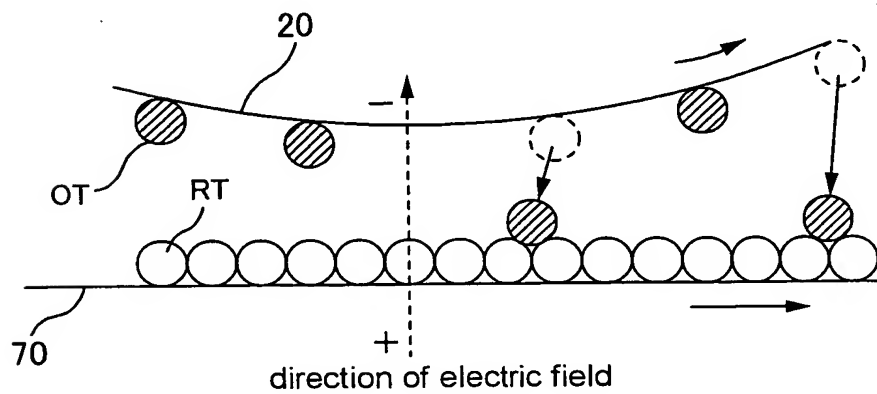


FIG. 19

order of development	1	2	3	4
toner color	Y	C	M	K
ratio in volume of fine toner (%)	2.5	1.5	1	0.5
charge amount ( $\mu\text{C/g}$ )	25	20	15	14.8
volume average particle diameter ( $\mu\text{m}$ )	8.5	8.5	8.5	8.5

FIG. 20

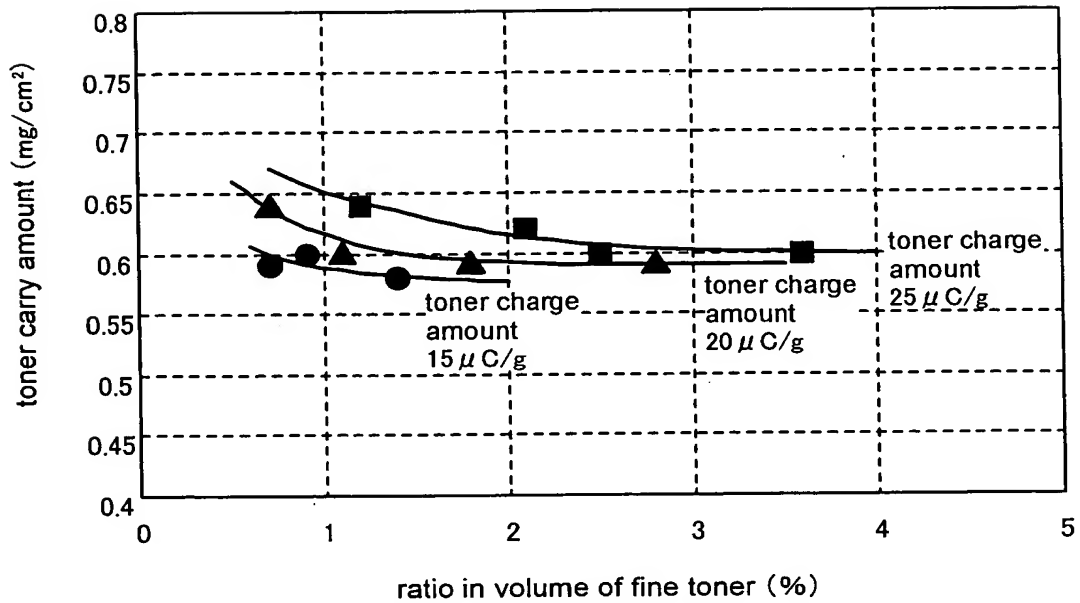


FIG. 21

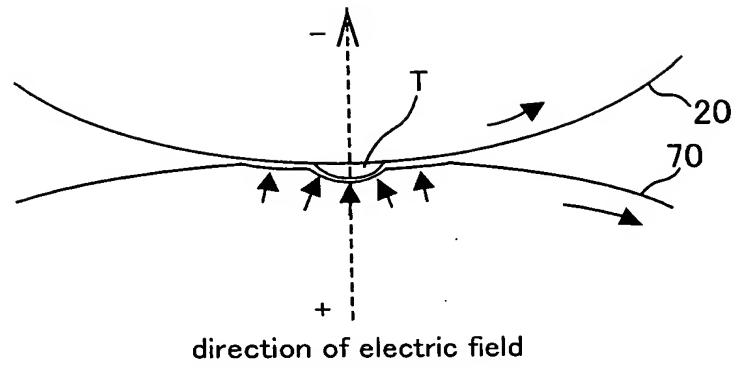


FIG. 22

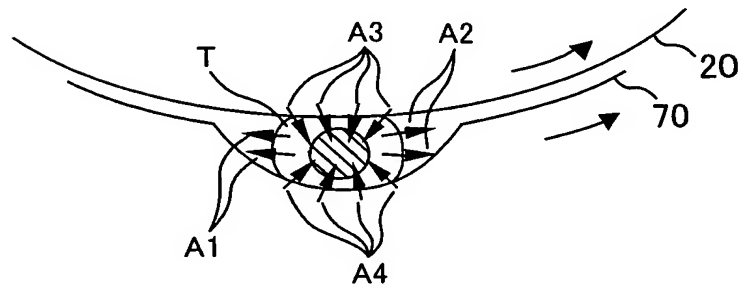


FIG. 23

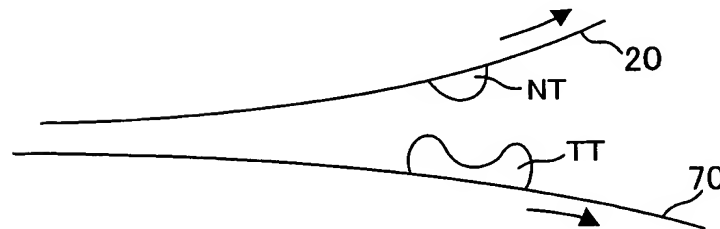


FIG. 24

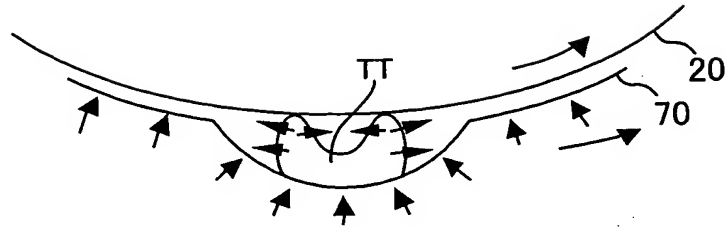


FIG. 25

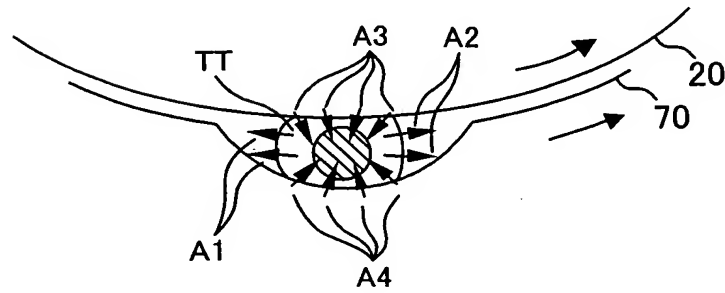


FIG. 26

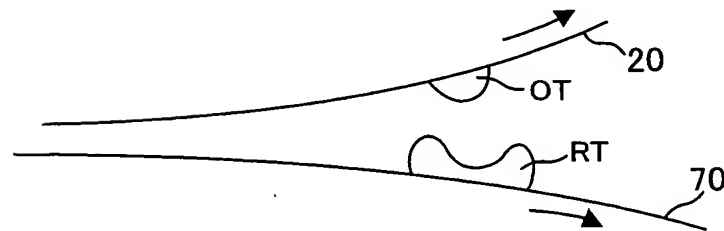


FIG. 27

order of development	1	2	3	4
toner color	C	C	C	C
degree of occurrence of hollow defects (initial state of usage)	3.7	4.0	4.3	4.6
degree of occurrence of hollow defects	3.0	3.7	4.3	5.0

FIG. 28

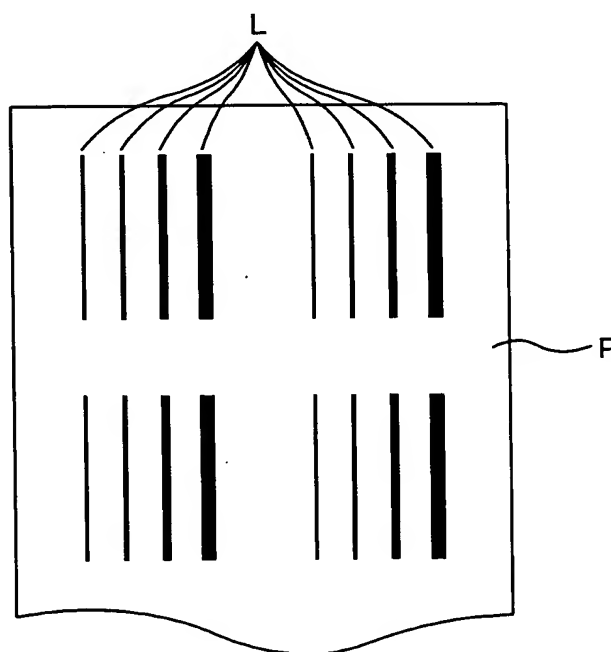


FIG. 29

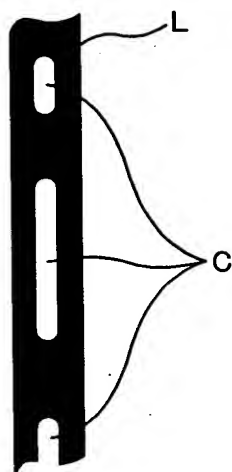


FIG. 30

order of development	4	4	4	4
toner color	Y	C	M	K
degree of occurrence of hollow defects	4.7	4.6	4.7	4.8

FIG. 31

order of development	1	2	3	4
toner color	Y	C	M	K
ratio in volume of fine toner (%)	2.5	0.5	1	2
volume average particle diameter ( $\mu\text{m}$ )	8.5	8.5	8.5	8.5

FIG. 32

order of development	4	4	4
toner color	C	C	C
ratio in volume of fine toner (%)	0.5	1.5	2.5
volume average particle diameter ( $\mu\text{m}$ )	8.5	8.5	8.5
degree of occurrence of hollow defects (initial state of usage)	4.6	4.2	3.9
degree of occurrence of hollow defects	5.0	3.9	3.7

FIG. 33

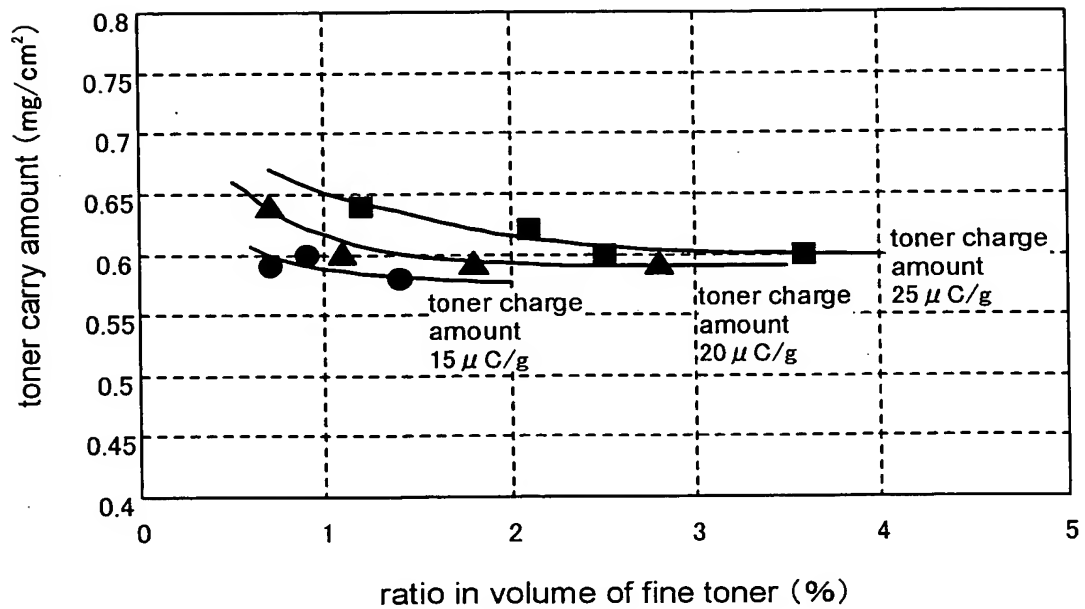


FIG. 34

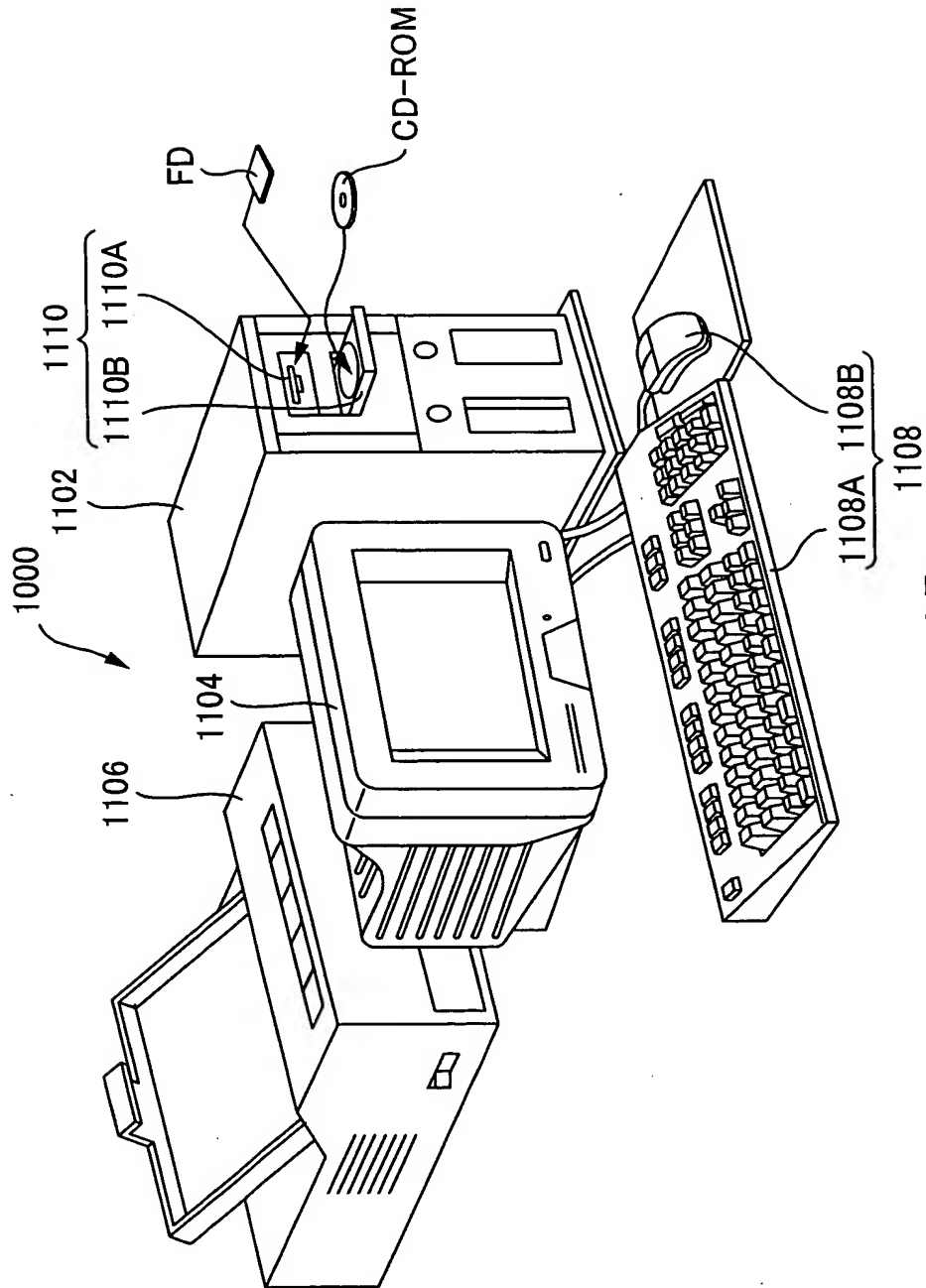


FIG. 35



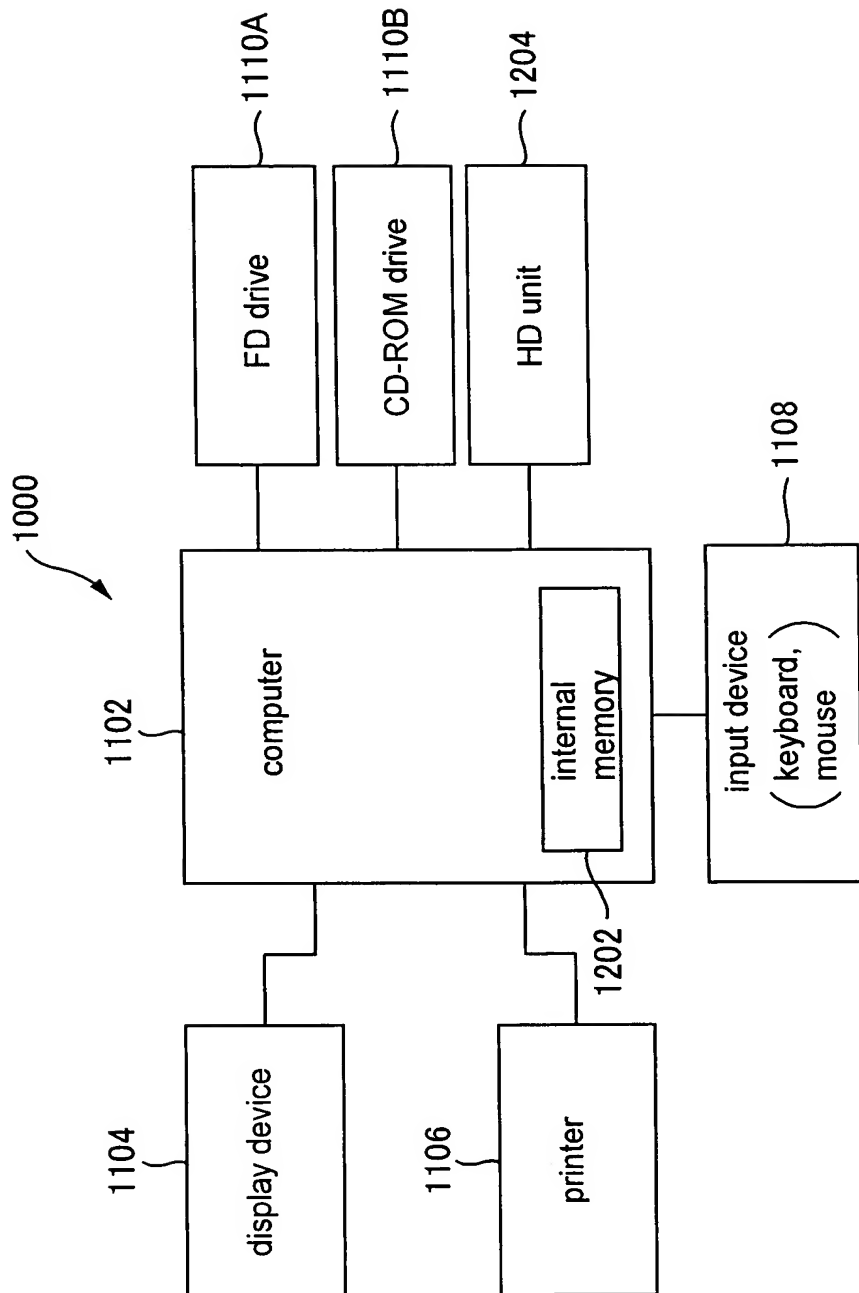


FIG. 36